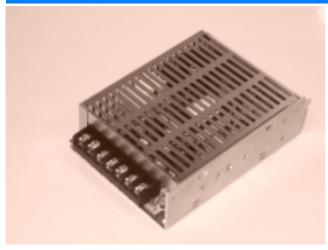
# TOTAL POWER INT. TPS40LB SWITCHING MODE 40W LOW COST BOX TYPE POWER SUPPLY



# **ELECTRICAL SPECIFICATIONS**

#### **INPUT**

\*Input range-----90~264 VAC, universal

\*Frequency-----47~63Hz

\*Inrush current-----30A typical, Cold start @25°C,115VAC \*Efficiency-----65% ~80% typical at full load \*EMI filter-----FCC Class B conducted, CISPR 22 Class B conducted, EN55022 class B

Conducted

\*Line regulation---- +/- 0.5% typical

#### **OUTPUT**

\*Maximum power----40W convection(Refer next page)
\*Hold-up time ------10ms typical at full load and 115 VAC nominal line

\*Overload protection-Short circuit protection

\*Overvoltage

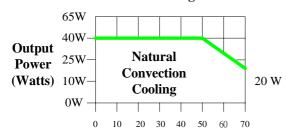
protection ----Main output 20% to 40% above

nominal output

\*Ripple/Noise --

+/- 1% Max. @full load (Optional +/-0.5% per inquiry)

#### **Power Derating Curve**



**Ambient Temperature( ° C)** 

#### KEY FEATURES

- \*Universal input
- \*Built-in EMI filter
- \*LOW COST
- \*Optional constant current change (for single output)

#### **APPLICATIONS**

- \*Telecommunications
- \*Computer peripherals/Lan & Hub
- \*Test & industrial equipments
- \*Medical instruments
- \*Business machines

#### EMI & EMC (IN PROCESS)

\*FCC part 15, Class B \*CISPR 22 / EN55022, Class B \*VCCI, Class 2

\*CE, EN61000-3-2 (Class A) and -3; EN61000-4-2,

-3, -4, -5, -6 and -11

#### SAFETY APPROVAL(IN PROCESS)

\*UL1950 / c UL \*Optional CSA 22.2, LEVEL 3

\*TUV EN60950

\*Optional UL 2601(EMI Class A)

#### **ENVIRONMENTAL**

\*Operating temperature:

0 to 50°C ambient; derate each output at 2.5% per degree from 50°C to 70°C

\*Humidity:

Operating; non-condensing, 5% to 95%

\*Vibration:

10~55 Hz at 1G 3 minutes period, 30 minutes along X. Y and Z axis

\*Storage temperature:

-40 to 85°C

\*Temperature coefficient:

+/- 0.05% per degree C

\*MTBF demonstrated:

>100,000 hours at full load and 25°C ambient conditions

### **TOTAL POWER**

## TPS40LB SWITCHING MODE 40W LOW COST BOX TYPE

MODEL	OUTPUT VOLTAGE	ADJUSTMENT RANGE	MAXIMUM OUTPUT CURRENT	PEAK OUTPUT CURRENT(NOTE1)	MINIMUM OUTPUT CURRENT	TOTAL REGULATION(NOTE3)	RIPPLE & NOISE %P-P(NOTE2)	PEAK OUTPUT POWER(NOTE1)
SINGLE C	UTPUT	MODEL S	ELECTION CH	IART				
TPS40LB-10	+5V	±10% Typical	8A	10.4A	0A	±3%	±1%	52W Typical
TPS40LB-11	+ 12V	±10% Typical	3.33A	4.33A	0A	±3%	±1%	52W Typical
TPS40LB-12	+15V	±10% Typical	2.66A	3.46A	0A	±3%	±1%	52W Typical
TPS40LB-13	+24V	±10% Typical	1.66A	2.16A	0A	±3%	±1%	52W Typical
TPS40LB-14	+48V	±10% Typical	0.83A	1.08A	0A	±3%	±1%	52W Typical
TPS40LB-15	+3.3V	±10% Typical	8A	10.4A	0A	±5%	±1.5%	35W Typical
OUAL OU			LECTION CHA	RT				
TPS40LB-20	+5V	±10% Typical	4A	7.8A	0.4A	±5%	±1.5%	52W Typical
	+12 V	Fixed	2.5A	5.2A	0.25A	±5%	±1%	
TPS40LB-21	+5V	±10% Typical	6A	7.8A	0.6A	±5%	±1%	52W Typical
	+24V	Fixed	0.5A	1.3A	0.05A	±5%	±1%	
TPS40LB-22	+5 V	±10% Typical	5A	6.5A	0.5A	±5%	±1%	52W Typical
	-5V	Fixed	3A	1.3A	0.3A	±5%	±1%	
TPS40LB-23	+12V	±10% Typical	2A	4.68A	0.2A	±5%	±1%	52W Typical
	-12V	Fixed	2A	1.17A	0.2A	±5%	±1%	z= // zypiou
TPS40LB-24	+15V	±10% Typical	1.4A	2.21A	0.14A	±5%	±1%	52W Typical
	-15V	Fixed	1.4A	2.21A	0.14A	±10%	±1%	>F
TPS40LB-25	+3.3V	±10% Typical	8.9A	11.57A	0.89A	±5%	±1.5%	52W Typical
	+12V	Fixed	0.9A	1.17A	0.09A	±10%	±1%	
TPS40LB-26	+5V +48V	±10% Typical Fixed	1A 0.8A	13A 0.26A	0.1A 0.08A	±5% ±10%	±1% ±1%	52W Typical
RIPLE O		MODEL SI	ELECTION CH					
TPS40LB-30	+ 5V	±10% Typical	3A	3.9A	0.3A	±5%	±1%	52W Typical
	+12V	Fixed	2A	2.6A	0.2A	±5%	±1%	
	-5V	Fixed	0.5A	0.65A	0.05A	±10%	±1%	
	+ 5V	±10% Typical	3A	3.9A	0.3A	±5%	±1%	52W Typical
	+12V	Fixed	2A	2.6A	0.2A	±5%	±1%	
TPS40LB-32	- 12V	Fixed	0.5A	0.65A	0.05A			
	+ 5V			0.0011	0.03A	±10%	±1%	
	131	±10% Typical	3A	3.9A	0.3A	±10% ±5%	±1% ±1%	
TPS40LB-32	+15V	±10% Typical Fixed	3A 2A					52W Typical
TPS40LB-32		Fixed Fixed		3.9A	0.3A	±5%	±1%	52W Typical
TPS40LB-32	+15V	Fixed Fixed ±10% Typical	2A	3.9A 2.6A	0.3A 0.2A	±5% ±5%	±1% ±1%	52W Typical
	+15V -15V +5V +15V	Fixed Fixed	2A 0.5A 3A 2A	3.9A 2.6A 0.65A 3.9A 2.6A	0.3A 0.2A 0.05A 0.3A 0.2A	±5% ±5% ±10%	±1% ±1% ±1%	52W Typical
	+15V -15V +5V +15V -5 V	Fixed Fixed ±10% Typical Fixed Fixed	2A 0.5A 3A 2A 0.5A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A	±5% ±5% ±10% ±5% ±5% ±10%	±1% ±1% ±1% ±1% ±1% ±1%	
ΓPS40LB-33	+15V -15V +5V +15V - 5 V + 5V	Fixed Fixed ±10% Typical Fixed	2A 0.5A 3A 2A 0.5A 3A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.3A	±5% ±5% ±10% ±5% ±5% ±10% ±5%	±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical
ΓPS40LB-33	+15V -15V +5V +15V -5 V +5V +15V	Fixed Fixed ±10% Typical Fixed Fixed ±10% Typical Fixed	2A 0.5A 3A 2A 0.5A 3A 1.5A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.3A 0.15A	±5% ±5% ±10% ±5% ±5% ±10% ±5%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	
TPS40LB-33	+15V -15V +5V +15V -5 V +15V +15V -12V	Fixed Fixed ±10% Typical Fixed Fixed ±10% Typical Fixed Fixed Fixed	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.15A 0.05A	±5% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical
TPS40LB-33 TPS40LB-34	+15V -15V +5V +15V -5 V +5V +15V -12V +5V	Fixed Fixed ±10% Typical Fixed Fixed ±10% Typical Fixed Fixed Fixed Fixed Typical	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A 3A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A 3.9A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.15A 0.05A 0.3A	±5% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical
TPS40LB-33 TPS40LB-34	+15V -15V +5V +15V -5 V +5V +15V -12V +5V +24V	Fixed Fixed ±10% Typical Fixed Fixed ±10% Typical Fixed Fixed Fixed Fixed ±10% Typical Fixed	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A 3A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A 3.9A 1.3A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.3A 0.15A 0.05A 0.3A 0.15A	±5% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±5%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical
TPS40LB-33 TPS40LB-34	+15V -15V +5V +15V -5 V +15V -12V +5V +24V -12V	Fixed Fixed ±10% Typical Fixed Fixed ±10% Typical Fixed Fixed Fixed ±10% Typical Fixed Fixed Fixed	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A 3A 1A 0.5A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A 3.9A 1.3A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.3A 0.15A 0.05A 0.3A 0.1A	±5% ±5% ±10% ±5% ±5% ±10% ±5% ±10% ±5% ±10%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical
FPS40LB-34 FPS40LB-34 FPS40LB-35	+15V -15V +5V +15V -5 V +15V -12V +5V +24V -12V +5V	Fixed Fixed ±10% Typical Fixed ±10% Typical Fixed ±10% Typical Fixed ±10% Typical Fixed Fixed Fixed Fixed Fixed Fixed Fixed Fixed	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A 3A 1A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A 3.9A 1.3A 0.65A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.3A 0.15A 0.05A 0.3A 0.1A	±5% ±5% ±10% ±5% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±5%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical 52W Typical
TPS40LB-33  TPS40LB-34  TPS40LB-35	+15V -15V +5V +15V -5 V +15V -12V +5V +24V -12V +5V +12	Fixed Fixed ±10% Typical Fixed ±10% Typical Fixed Fixed Fixed Fixed ±10% Typical Fixed Fixed Fixed Fixed Fixed Fixed Fixed	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A 3A 1A 0.5A 1A 2.5A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A 3.9A 1.3A 0.65A 9.1A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.3A 0.15A 0.05A 0.3A 0.1A	±5% ±5% ±10% ±5% ±5% ±10% ±5% ±10% ±5% ±10%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical
FPS40LB-34 FPS40LB-34 FPS40LB-35	+15V -15V +5V +15V -5 V +15V -12V +5V +24V -12V +5V	Fixed Fixed ±10% Typical Fixed ±10% Typical Fixed Fixed Fixed ±10% Typical Fixed ±10% Typical Fixed Fixed Fixed Fixed Fixed Fixed	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A 3A 1A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A 3.9A 1.3A 0.65A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.3A 0.15A 0.05A 0.3A 0.1A	±5% ±5% ±10% ±5% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±5%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical 52W Typical
FPS40LB-34 FPS40LB-34 FPS40LB-35	+15V -15V +5V +15V -5 V +15V -12V +5V +24V -12V +5V +12	Fixed Fixed ±10% Typical Fixed ±10% Typical Fixed Fixed Fixed Fixed ±10% Typical Fixed Fixed Fixed Fixed Fixed Fixed Fixed	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A 3A 1A 0.5A 1A 2.5A 0.5A 3A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A 3.9A 1.3A 0.65A 9.1A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.3A 0.15A 0.05A 0.3A 0.1A 0.05A 0.1A	±5% ±5% ±10% ±5% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±5% ±10% ±5% ±5%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical 52W Typical 52W Typical
TPS40LB-32 TPS40LB-33 TPS40LB-34 TPS40LB-36 TPS40LB-36	+15V -15V +5V +15V -5 V +15V -12V +5V +24V -12V +5V +12	Fixed Fixed  ±10% Typical Fixed  ±10% Typical Fixed  Fixed  ±10% Typical  Fixed  Fixed  Fixed  Fixed  Fixed  ±10% Typical  Fixed  ±10% Typical  Fixed  Fixed  Fixed  Fixed  Fixed	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A 3A 1A 0.5A 1A 0.5A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A 3.9A 1.3A 0.65A 9.1A 1.95A 1.04A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.15A 0.05A 0.1A 0.05A 0.1A 0.05A	±5% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical 52W Typical
TPS40LB-34 TPS40LB-35 TPS40LB-36	+15V -15V +5V +15V -5 V +15V -12V +5V +24V -12V +5V +12 -12V +5V	Fixed Fixed  ### Fixed  ### Fixed  ### Fixed  ### ### Fixed  ### ### ### ### ###  ### ### ### ###	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A 3A 1A 0.5A 1A 2.5A 0.5A 3A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A 3.9A 1.3A 0.65A 9.1A 1.95A 1.04A 3.9A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.3A 0.15A 0.05A 0.15A 0.05A 0.1A 0.05A 0.1A 0.25A 0.1A 0.25A 0.15A 0.05A 0.15A 0.05A	±5% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±5%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical 52W Typical 52W Typical
TPS40LB-34 TPS40LB-35 TPS40LB-36	+15V -15V +5V +15V -5 V +15V -12V +5V +24V -12V +5V +12 -12V +5V +12	Fixed Fixed  ±10% Typical Fixed  ±10% Typical Fixed  Fixed  ±10% Typical  Fixed  Fixed  Fixed  Fixed  Fixed  ±10% Typical  Fixed  ±10% Typical  Fixed  Fixed  Fixed  Fixed  Fixed	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A 3A 1A 0.5A 1A 2.5A 0.5A 3A 1.5A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A 3.9A 1.3A 0.65A 9.1A 1.95A 1.04A 3.9A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.3A 0.15A 0.05A 0.1A 0.05A 0.1A 0.05A 0.1A 0.05A 0.1A	±5% ±5% ±10% ±5% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±5% ±10%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical 52W Typical 52W Typical 52W Typical
TPS40LB-34 TPS40LB-35 TPS40LB-36	+15V -15V +5V +15V -5 V +15V -12V +5V +24V -12V +5V +12 -12V +5V +12 +24V	Fixed Fixed  ### Fixed  ### Fixed  ### Fixed  ### ### Fixed  ### ### ### ### ###  ### ### ### ###	2A 0.5A 3A 2A 0.5A 3A 1.5A 0.5A 1A 0.5A 1A 2.5A 0.5A 3A 1.5A 0.5A	3.9A 2.6A 0.65A 3.9A 2.6A 0.65A 3.9A 1.3A 0.65A 3.9A 1.3A 0.65A 9.1A 1.95A 1.04A 3.9A 1.3A	0.3A 0.2A 0.05A 0.3A 0.2A 0.05A 0.3A 0.15A 0.05A 0.15A 0.05A 0.1A 0.05A 0.1A 0.25A 0.1A 0.25A 0.15A 0.05A 0.15A 0.05A	±5% ±5% ±10% ±5% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10% ±5% ±10%	±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1% ±1%	52W Typical 52W Typical 52W Typical

NOTES: 1) Peak loads for lasting <30 seconds with a maximum 10% duty cycle are acceptable. Please contact us if need special peak load.

<sup>2)</sup> Maximum peak to peak noise expressed as a percentage of output voltage, 20MHz bandwidth,  $0.1\,\mu$  F and  $47\,\mu$  F Cap. on outputs.

<sup>3)</sup> Loading test conditions are set for all outputs at minimum, middle and maximum of loads. Special cross loading requirement is welcomed.

<sup>4)</sup> Detailed engineering specification of each model is available for inquiry.

<sup>5)</sup> Special output voltage/current inquiry is welcomed.

<sup>6)</sup> Specifications subject to change without notice.

